

Hill Agriculture Economics & Sustainability



Pawan Kumar Sharma
Sudhakar Dwivedi



Hill Agriculture

The Economics and Sustainability

Editors

Pawan Kumar Sharma

KVK, Poonch, SKUAST-Jammu

email : pawanvatsya@gmail.com

and

Sudhakar Dwivedi

Division of Agricultural Economics & Statistics

SKUAST - Jammu

email : dwivedi.sudhakar@gmail.com



NEW INDIA PUBLISHING AGENCY

New Delhi – 110 034



NEW INDIA PUBLISHING AGENCY

101, Vikas Surya Plaza, CU Block, LSC Market

Pitam Pura, New Delhi 110 034, India

Phone: + 91 (11)27 34 17 17 Fax: + 91(11) 27 34 16 16

Email: info@nipabooks.com

Web: www.nipabooks.com

Feedback at feedbacks@nipabooks.com

© **Editors, 2013**

ISBN : 978-93-81450-87-1

All rights reserved, no part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without the prior written permission of the publisher or the copyright holder.

This book contains information obtained from authentic and highly regarded sources. Reasonable efforts have been made to publish reliable data and information, but the author/s, editor/s and publisher cannot assume responsibility for the validity of all materials or the consequences of their use. The author/s, editor/s and publisher have attempted to trace and acknowledge the copyright holders of all material reproduced in this publication and apologize to copyright holders if permission and acknowledgements to publish in this form have not been taken. If any copyright material has not been acknowledged please write and let us know so we may rectify it, in subsequent reprints.

Trademark notice: Presentations, logos (the way they are written/presented) in this book are under the trademarks of the publisher and hence, if copied/resembled the copier will be prosecuted under the law.

Composed, Designed and Printed at Jai Bharat Printing Press, Delhi

Contents

<i>Foreword</i>	<i>v</i>
<i>Preface</i>	<i>vii</i>
<i>List of Contributors</i>	<i>ix</i>

Theme 1 : Performance of Hill Agriculture in India

1. Agricultural Mechanization in Hills: Scope and Constraints	1
<i>Sanjay Khar, Rakesh Sharma and Punit Choudhary</i>	
2. Dairy Enterprise for Sustainable Livelihood in North East Hilly Region.....	13
<i>Rishikanta Singh</i>	
3. Economics and Profitability of Fodder Crops in Hills.....	31
<i>Vikas Kumar and Sudhakar Dwivedi</i>	
4. Socio-Economic Features of Nomadic Gujjars: Livestock Grazers of Jammu (J&K)	37
<i>Tarunvir Singh and Sudhakar Dwivedi</i>	
5. Adopting Sericulture for Sustainable Hill Agriculture.....	47
<i>Amardev Singh</i>	
6. Sheep Farming in Hills: A Subsidiary Enterprise for Income Generation.....	55
<i>Suraj Parkash, Arvind Ishar and Sanjeev Kumar</i>	
7. Underutilized Crops of Himalayan Region	67
<i>Arun Gupta, Lakshmi Kant, P. K. Agrawal and V. Mahajan</i>	
8. Alleviating Drudgery of Indian Farm Women through Technology Interventions in Animal Husbandry.....	89
<i>Puja Mathur and Pawan Kumar Sharma</i>	

Theme 2 : Public/Private Support for Hill Agriculture

9. Influence of Scientific Orientation on Entrepreneurial Behaviour of Pineapple Growers in Nagaland 103
K. K. Jha

Theme 3 : Organic Farming in Hills: Status, Scope and Economics

10. Organic Farming in Hills: Opportunities and Constraints 113
A K Tripathi, A Roy, N U Singh and S Seeralan
11. Organic Farming in Hills: An Economic Analysis of Vermi-Composting 129
Manoj Gupta, S. S.Paliyal and Pankaj Mittal
12. Vermiculture Technology: Boon for Hill Agriculture..... 145
Sunil Kumar and Sanjay Sachan

Theme 4 : Horticulture in Hills: Status, Scope and Economics

13. Trends of Major Fruit Crops in Himachal Pradesh 167
Amod Sharma and Sudhakar Dwivedi
14. Economic Importance of Vegetables: Exclusive to Hills..... 181
Neerja Sharma, A.K. Gupta, R.K. Sanmotra, R.K. Arora and Raju Gupta
15. King Chilli – Current Scenario and Future Prospects in North Eastern India..... 195
S. Mahanta and K.H. Begum
16. Seabuckthorn: An Attractive Prospect for Hill Regions..... 211
Rajander S Bali, V K Sah, Abhishek Bahuguna and Birendra Prasad
17. Economics of Insect Pest and Disease Management in Chilli (*Capsicum annuum* L.)..... 223
Sandhya Bahuguna, Birendra Prasad and Abhishek Bahuguna
18. Greenhouse Technologies for Hill Agriculture..... 247
Neerja Sharma, A. K. Gupta, R. K. Sanmotra, and R. K. Arora

Theme 5 : Agricultural Marketing in Hills: Status, Marketed Surplus, Producer share, Interventions etc.

19. Agricultural Marketing in Hills: Problems and Opportunities..... 263
Pawan Kumar Sharma, Sudhakar Dwivedi and Sudhir Jamwal

Theme 6 : Status of Land Reforms and Agricultural Holdings

20. Land Reforms and Agriculture Development for Poverty Elimination 273
Harnam Singh, Anil Bhat and S.P. Singh

Theme 7 : Agricultural Credit and Insurance

21. Role of Financial Agencies in Livestock Farming..... 289
B.K. Mishra, C.S. Choubey and Sunil Kumar
22. Mitigating Agriculture Risks through Crop Insurance..... 301
Anil Bhat, Jyoti Kachroo and Sudhakar Dwivedi

Theme 8 : Using ICT in Hill Agriculture

23. Information Technology for Efficient Agricultural Marketing in Hills 315
K Srinivas, Mukesh Kumar and SRK Singh
24. Accessibility of ICT in Uttarakhand Hills and Its Impact..... 327
Kiran Yadav, Sunil Kumar and Chandra Dev

Theme 9 : Facing the Challenges of WTO in Hill Agriculture

25. WTO in Agriculture: New Dimensions..... 341
Sudhakar Dwivedi and Shobhana Gupta

Theme 10 : Sustainability Issues in Hill Agriculture

26. New Dimensions of Agricultural Extension for Hill Agriculture 355
Parveen Kumar, M. S. Nain

27.	Economic Disposal of Livestock Waste.....	375
	<i>B.K. Mishra, Santosh Singh, Sunil Kumar and C.S. Choubey</i>	
28.	Sustainable Agriculture: Current Demand for Feeding the Increasing Population	405
	<i>SK Kaushik, Shobhana Gupta and KV Singh</i>	
29.	Grain Amaranth: An Economic Key to Sustainable Hill Agriculture	419
	<i>Birendra Prasad, Abhishek Bahuguna, Sunil Kumar and Rajander S Bali</i>	
30.	Plant-Biodiversity: Its Implications for Sustainable Hill Agriculture	433
	<i>Awnindra K. Singh, Permendra Singh and M.C. Dwivedi</i>	
31.	Seed Quality as Influenced by Packaging Container during Storage.....	455
	<i>Birendra Prasad and Abhishek Bahuguna</i>	
32.	Shifting Cultivation and Environmental Degradation- A Case Study of Hill Districts of Assam.....	473
	<i>Hiranya Kumar Baruah</i>	

Hill Agriculture Economics & Sustainability

READERSHIP : The book will be of value to students, researchers, faculty members and scientists relating to the field of agriculture, agriculture extension, agri-business and agri-economics, ICT, Horticulture and medicinal plants, natural products, traditional medicines and sustainable and rural development.

Hill Agriculture: Economics and Sustainability is a concept for creating more awareness regarding Hill Agriculture in India. This book contains articles contributed by different authors from all over India including North Eastern Hill Region. The book tries to cover all aspects of Hill Agriculture related to economics of different enterprises, marketing and sustainability.

The broad theme of book is divided into following sub-themes:

- Performance of Hill Agriculture in India
- Public/Private Support for Hill Agriculture
- Organic farming in Hills: Status, Scope and Economics
- Horticulture in Hills: Status, Scope and Economics
- Agricultural Marketing in Hills: Status, Marketed Surplus, Producers' share, Interventions etc.
- Status of Land Reforms and Agricultural holdings
- Agricultural Credit and Insurance
- Using ICT in Hill Agriculture
- Facing the Challenges of WTO in Hill Agriculture
- Sustainability Issues in Hill Agriculture

2014, 492 pages., figs., tabs., col. plts., 25cm

Pawan Kumar Sharma :

Subject Matter Specialist, KVK, SKAUST, Chatha Campus, Jammu and Kashmir, India

Sudhakar Dwivedi :

Division of Agriculture Economics and Statistics, SKAUST, Chatha Campus, Jammu and Kashmir, India



NEW INDIA PUBLISHING AGENCY

101, Vikas Surya Plaza, CU Block, L.S.C. Market
Pitam Pura, New Delhi-110 034, India
Tel. : +91(11) 27341717, Fax : +91(11) 27341616
E-mail : info@nipabooks.com
Web : www.nipabooks.com

